

cian must surround his patient with influence and special nurses to secure high grade service and protection for himself, while the efforts of administrators are wasted in pacification and the time of nurses in carrying out foolish instructions that too frequently are given by Doctor X because Doctor Y uses some other method.

The successful hospital is one where there is mutual interest and mutual responsibility between all departments, both professional and administrative; where there is team work between members of the staff and between the staff and the administration, all working to give the highest type of service at the least expense in effort and money. There must be mutual acceptance of the slogan that the hospital's interests and reputation are a true reflection of the interest and standing of members of its staff, and that the success of the one is intimately bound up in the success of the other.

The furtherance of this spirit requires a mutual pledge of loyalty between the hospital and each member of its staff; a mutual agreement that records shall be kept; unnecessary surgery avoided; hazards of accidents reduced to a minimum; laboratory, X-ray and other diagnostic methods used to their greatest and most economical advantage; the simplest of successful remedies employed; methods standardized as far as feasible; nurses and employees trained in careful, efficient, economical practices; incompetency, charlatanism and cultism combated by all legitimate means; the humanities, art and idealism of medicine promulgated; and "everlasting team work" applied consistently and persistently to the prevention of disease, the education of juniors and assistants of all sorts and the sympathetic efficient care of the sick.

To be complete, a staff must have one or more members representing each specialty of medicine, including pathology and roentgenology; and the organization must be along the recognized lines of cleavage and co-ordination of these specialties. In other words, the successful, progressive staff must be able to handle well, within its own membership and within the walls of the hospital, all the complex problems of diagnosis and treatment, and unless this is possible, the use of the terms "hospital" and "staff" are both misapplied. This means, of course, such care in formation of a staff that there shall be mutual confidence and respect in judgment and integrity between members representing the various special fields of medicine.

IDEAL EXECUTIVE COMMITTEE.

The ideal organization of various departments, such as medicine, surgery, etc., is, to have a chief (by any title) with sufficient associates and assistants to carry on the work and give necessary instruction to juniors. In small towns in particular and in the formation of new staffs anywhere, the personal equation often makes such an arrangement difficult or impossible. Where this is so, the appointment of all members may be made with uniform title and each department may elect its own "executive chairman" at regular stated intervals. The chairmen of all departments, with the

general officers of the staff and the chief administrator of the hospital, constitute an ideal executive committee for all purposes.

RELATION OF STAFF AND DIRECTORS.

Failure to appreciate the correct relations of the staff to the board of directors all too frequently is a cause of friction and consequently of inefficiency in hospitals as in other health betterment organizations. The only safe position for a staff to assume is, that the directors have the final decision in all matters, just as they by custom and law must assume the final responsibility. Some who disagree with this view will point to mistakes made in armies because there the medical department is responsible to lay generals, who have the final decision in important matters. The responsibility is similar in all other technical departments and no army could succeed with authority divided. However, the wise general will follow almost without question the suggestions of his medical men. So too in civil life, safe directors, in things medical, will follow the wishes of their medical staff, whether the organization be a hospital, an industrial plant, a mercantile establishment or a transportation company.

Actually, it frequently is difficult to get a staff of medical men to agree upon policies or details, and it is wise to have a body to hold conditions in statu quo until such team work has been secured by discussion and study. In carrying out matters purely medical, the wise board of directors will concern itself principally in encouragement and expressions of appreciation. With problems involving other phases of work and requiring co-operation or the increased expenditure of funds, the directors should secure careful complete discussion and, if possible, complete agreement before allowing action to take place.

The relations between the staff and the managing director (superintendent or whatever other title is used) of a hospital also is important, and will be taken up in the next article, which will be devoted to the duties of the chief executive.

Original Article

ORGANIZATION OF A METABOLISM UNIT.*

By N. W. JANNEY, M. D., Ph. D., Santa Barbara, Cal.

Specialization in clinical medicine has made it increasingly difficult to insure proper care of certain groups of cases without special organization. In surgery this necessity has been better appreciated and met than in medicine. Thus obstetric, venereal, orthopedic and gynecologic units are now usually seen in general hospitals. The Brady Urologic Institute represents a further development. Here an expert staff has been provided with a building specially constructed and equipped for its purpose, provided with every facility for the investigation and research of urinary tract diseases, the whole forming a complete unit, but representing an integral portion of the Johns

* From the Memorial Laboratory and Clinic, Santa Barbara, California.

Hopkins Hospital, Baltimore. Special endowment has been provided for its support. The immediate success of the Brady Institute is the best proof of its usefulness and the need of other similar developments.

On the medical side progress has been less rapid. It has been but between one and two decades ago that, excepting the contagious, all manner of cases, tuberculous, nervous, and even psychoses, were to be found in a general medical ward. At present there still remains one group of medical cases for which, with very few exceptions, no adequate provision has been made nor indeed contemplated in the average general hospital. This group is the metabolic.

Present Status of Study and Treatment of Metabolic Diseases.

It is no exaggeration to state that the treatment of metabolic cases in the hands of the general physician, or even the internist, and in the average general hospital, is still frequently as crude as the science of surgery before the era of antisepsis. Various reasons may be adduced to account for this state of affairs.

Formerly the rarity of metabolic cases was advanced as a ground for little attention being paid them by the medical attending physicians and hospital authorities. This holds true no longer. Diabetes, particularly in the United States, is on the increase, due probably to the enormous per capita sugar consumption of its inhabitants. The writer well remembers that during two years spent in Friederich v. Miller's Munich clinic but a decade ago, it was a rare occurrence to find more than two diabetics among 800 medical beds. In American hospitals of half this bed capacity a like or larger number of sufferers from this disease are now usually to be found. Joslin estimates that 1 in 75 of the total population either has the disease or will develop it, therefore that there are 1,000,000 potential diabetics in the United States to-day. Recent developments in the diagnosis and treatment of nephritis has added many cases to the metabolic quota of a given hospital. Another increment is due to better recognition of various endocrine diseases with modern diagnostic methods.

Although all this is generally recognized among medical men, progress in treatment of such cases remains quite slow. This may be ascribed to the fact that there are but few physicians having a thorough training in metabolic work. Therefore, more than superficial interest is still not frequently afforded either the hungry diabetic or waterlogged nephritic.

Granting, however, sufficient professional knowledge, interest and enthusiasm on the part of the medical attendant, the relative large expenditure of time required for successful study of metabolic cases precludes their proper care by either the general practitioner or busy internist. If, however, both the requisite training and necessary time on the part of the physician are available, the metabolic case yet remains a difficult practical problem. Frequently intricate weighed diets are

absolutely necessary for successful treatment. These are often unobtainable in the usual household or the general hospital diet kitchen. Again, complicated chemical and other laboratory methods are needed for proper estimation of the patient's condition and control of treatment. Specialized laboratories become necessary which are beyond the means of the ordinary practitioner and remain, indeed, usually inadequately provided for in the general hospital. Another just criticism which may be made of the usual treatment now afforded the metabolic case, is the confusion arising from inadequate and unsystematized methods of record or laboratory, clinical, and dietary data.

Economic factors play their part in the generally unsatisfactory status of metabolic treatment. Most metabolic diseases are eminently chronic. Their proper treatment depends upon special and sometimes expensive articles of diet, as well as long series of elaborate chemical examinations. Even the middle class purse finds it difficult to meet the costs entailed. Periods of neglected treatment are therefore common. For the poor wage-earner suffering from a nutritional disease, present living conditions prove an ever greater burden. The writer has seen the diabetic poor of New York City in recent years literally die of improper food, due to their inability to provide themselves with suitable articles of diet, and to the fact that no suitable hospital provision has been made for their reception.

Organization of a Metabolic Unit.

How shall improvement be brought about in the handling of metabolic cases? Experience has taught that special provision should be made for the complex treatment indicated. It is self-evident that such cases must be collected in sufficient numbers to justify this special provision, and be placed in a separate portion of a hospital or institution *per se*. The next step would logically be to provide a specially trained clinical staff. Secondly, a diet kitchen unusually well equipped for the heavy requirements to be put upon it; and, thirdly, excellent chemical and clinical laboratories with trained workers. Should all these requirements be met, these departments must all be smoothly co-ordinated and systematized into a perfectly functioning whole, in order to secure the best results. It is obvious that considerable financial support of such a clinic is indispensable in order to enable the middle and poorer classes to benefit by this treatment.

Such an ideal metabolic unit has to the writer's knowledge not yet been developed in this country for various reasons already mentioned. There are, indeed, several research institutions where unusual excellence in certain aspects of metabolic work has been attained. However, none of these, owing to their peculiar purposes, are adapted to all classes of metabolic cases. Again, it may be fairly said that in spite of, or perhaps perforce of, the splendid scientific advances attained by the workers in such institutions, practical treatment of metabolic cases has not always been as satisfactory from the patient's own standpoint.

The purpose of the ideal metabolic clinic may be defined as the scientific study and treatment of the nutritional diseases such as diabetes, nephritis, gout, thyroid and other endocrine diseases, obesity, under-nutrition and dietetic problems. Research investigations in this field would represent a large part of its activities. Instruction to post-graduate students and dissemination of scientific knowledge to the profession would be additional aims. A further and much needed function would be the practical instruction of graduate and pupil nurses in applied dietetics.

For such an institution it is doubtful whether location in a metropolis be advisable. The problem of the treatment of chronic diseases differs greatly from that of acute ailments. Removal from the stress of life in a large city is peculiarly beneficial during the period of constructive re-education and adaptation of the chronic invalid to the conditions necessitated by his disease. An additional desideratum would be open-air existence in an ideal climate and among beautiful natural surroundings, on account of the well known effects of such factors on chronic invalidism. These features have long been recognized by European clinicians who have been aided by civic organizations and even municipalities in building up the great spa resorts, where everything conducive to the health and entertainment of the chronic invalid has been secured.

The Memorial Laboratory and Clinic of Santa Barbara, California, represents two years of organization and study with the view of establishing a metabolism unit meeting as far as possible the requirements outlined above. Through the wise provision of Dr. Nathaniel Bowditch Potter* of New York City, founder of the clinic, sufficient funds were collected or pledged at the outset to insure a complete organization. The donors to the clinic are the Carnegie Institute for the Advancement of Teaching and a number of philanthropic individuals.

The clinic was organized first at the New York City Hospital, then transferred, practically *in toto*, to Santa Barbara, California, where it became affiliated with the Cottage Hospital of that city. During the organization period Dr. Potter sought and obtained the advice of nearly every metabolist of note in the country. This clinic in its final form is therefore to be considered the crystallization of the best thought of the profession in a practical manner. After a year's work at Santa Barbara, the success of the project was such that three philanthropic friends of the clinic gave it a permanent home, in the form of a wing-like extension of the Cottage Hospital. This was a most important step as it represented the first building known to the writer specially designed for the treatment of and research in metabolic cases. The architecture conforms to Southern California style; a commodious two-story structure with open verandas and balconies

and sun-rooms. The first floor includes, administrative, reception rooms, research library, classroom for dietetic and chemical demonstrations and instruction of diabetic patients, respiration apparatus room for basal metabolism studies, diet kitchen, chemical, clinical and bacteriological laboratories. The X-Ray department and other clinical facilities are afforded by the Cottage Hospital, with which a harmonious mutually beneficial agreement has been made. Special features provided for in this clinic are an extremely roomy and well equipped diet kitchen, with every provision for the preparation of quantitative food portions, automatic dumb-waiter for transferring the food to a special serving kitchen on the patients' floor; a room for the temporary reception of urine, stool and other specimens, pending their collection and forwarding by another special dumb-waiter direct to the laboratories. In the furnishing of the patients' floor much care was given to suppressing the stereotyped hospital sick room by the introduction of an attractive color scheme in furniture and draperies, which adds to the comfort of the non-infectious metabolic patient without being a source of danger. The perfect climate of Santa Barbara enables even the bedridden to live an open-air life during the entire year, an extremely important feature of treatment. In the handling of each patient an effort is made to study individual, social and economic problems so that his future mode of living may be suitably modified to favor his physical condition. The problem of chronic diseases will not be solved until more attention be generally paid to this factor.

A number of ward and endowed beds have already been provided in order that needy patients, as well as those desirable for research studies, may be accommodated to the limit of capacity.

The personnel of the staff includes the director, two clinical assistants, chemist, assistant chemist, bacteriologist and clinical pathologist, dietitian-nurse in charge, dietitian, assistant-dietitian, special research worker, secretary, accountant and nursing staff.

The time may be said to be at hand when a suitably organized metabolism unit should be included in the organization of every general hospital. The purposes of the work contemplated must, however, be clearly borne in mind. Thus, should merely the modern treatment of metabolic cases be aimed at, neither an especially constructed and equipped building, nor a large staff are prime necessities. In the writer's opinion, certain requirements must, however, be met to insure real success. Metabolic cases should be under the charge of but a single member of the hospital staff. They must be segregated from other patients, fed from a special diet kitchen, and the chemical work carried out by a worker trained in some well known laboratory. It should never be forgotten that many chemical methods now commonly used demand the finest analytical technique. The chief difficulty in organizing metabolism units will, however, be found to be in securing the physician himself, for not even the

* The regretted death of Dr. Potter occurred July 5th, 1919. Dr. Nelson W. Janney of New York City had previously been appointed director of the Memorial Laboratory and Clinic.

finest general internal training will insure that keen chemical discernment and extensive knowledge of diet and food values required for success in the treatment of difficult metabolic case problems. It is hoped that the future development of metabolism units will enable young physicians to obtain that which is now so difficult to secure, an adequate metabolic training.

REVIEW OF 1918 CENSUS OF CAUSES OF DEATH:

The Census Bureau's annual compilation of mortality statistics for the death registration area in continental United States, which will be issued shortly, shows 1,471,367 deaths as having occurred in 1918, representing a rate of 18.0 per 1,000 population, the highest rate on record in the Census Bureau—due to the influenza pandemic.

Of the total deaths 477,467, or over 32 per cent., were due to influenza and pneumonia (all forms), 380,996 having occurred in the last four months of the year during the influenza pandemic. The rate for influenza and pneumonia (all forms) is 583.2 per 100,000. Influenza caused 244,681 deaths and pneumonia (all forms) 232,786, showing rates of 298.9 and 284.3 per 100,000, respectively, these being the highest rates which have ever appeared for these causes. The rate in 1917 for influenza was 17.2 and for pneumonia (all forms) was 149.8. In fact the difference (416.2 per 100,000 population) between the 1917 and 1918 rates corresponds with the excess mortality which occurred in the last four months of the year from the influenza pandemic.

The next most important causes of death were organic diseases of the heart, tuberculosis (all forms), acute nephritis and Bright's disease, and cancer, which together were responsible for 391,391 deaths, or nearly 27 per cent. of the total number.

The death registration area in 1918 comprised 30 States, the District of Columbia, and 27 registration cities in non-registration States, with a total estimated population of 81,868,104, or 77.8 per cent. of the estimated population of the United States. The Territory of Hawaii is now a part of the registration area, but the figures given in this summary relate only to continental United States.

The deaths from organic diseases of the heart numbered 124,668, or 152.3 per 100,000 population. Tuberculosis in its various forms caused 122,040 deaths, of which 108,365 were due to tuberculosis of the lungs. The death rate from all forms of tuberculosis was 149.1 per 100,000, and from tuberculosis of the lungs, 132.4. The rate from tuberculosis of all forms declined continuously from 200.7 per 100,000 in 1904 to 141.6 in 1916, the decrease amounting to nearly 30 per cent.; but for 1917 and 1918 increases are shown, the 1918 rate being somewhat higher than the rate for 1917, when it was 146.4. Until 1912 more deaths were due to tuberculosis than to any other single cause, but in that year and during the period 1914-1918 the mortality from tuberculosis was less than that from heart diseases.

Bright's disease and acute nephritis caused 79,343

deaths, or 96.9 per 100,000. This is a noticeable decrease as compared with 1917 when the rate was 107.4 per 100,000.

Cancer and other malignant tumors were responsible for 65,340 deaths, of which number 24,783, or nearly 38 per cent., resulted from cancer of the stomach and liver. The rate (79.8) is a decrease from 1917, when it was 81.6. With the exceptions of the years 1906, 1907, 1911, 1917, and 1918, there has been a continuous increase in the death rates from these diseases. Typhoid fever resulted in 10,210 deaths, or 12.5 per 100,000. The mortality rate from this cause has shown a remarkable reduction since 1900, when it was 35.9, the proportional decrease amounting to 65 per cent. This highly gratifying decline demonstrates in a striking manner the efficacy of improved sanitation and of the modern method of prevention—the use of the antityphoid vaccine.

Deaths from automobile accidents and injuries in 1918 totaled 7,525, or 9.2 per 100,000 population. This rate has risen rapidly from year to year, which strongly suggests the need for better traffic regulations and better enforcement of those we now have.

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

Tuesday Afternoon
2 to 5 P. M.

MEDICAL SECTION

Chairman's address.

W. W. ROBLEE, Riverside.

1. THE ETIOLOGY OF ONE HUNDRED AND FIFTY CASES OF ASTHMA.

GEORGE PINESS,
Los Angeles, Calif.

2. MALINGERING—ITS RELATION TO THE DOCTOR.

JOSEPH CATTON,
San Francisco.

Discussion by Henry C. Southworth.

The Doctor may consciously or unconsciously aid, abet or encourage malingering.

In cases involving compensation, the sanity of prisoners charged with murder, etc., doctors may debase their profession by contradictory testimony before boards or courts. In private practice or the clinic, a common opinion would probably have been arrived at in the same premises. Suggested remedies.

3. MISTAKES IN ABDOMINAL DIAGNOSIS.

CARO W. LIPPMAN, San Francisco.

A—Differentiation of

1—Organic.

2—Functional abdominal symptomatology.

3—Importance of fluoroscopic and X-Ray examination in ruling out organic disease.

1—Ulcer 90-93% correct.

1-a—Cancer, impossible to diagnose in early stage. Scirrhus carcinoma—inoperable when they come to the doctor—silent first stage.

2—Gallbladder trouble 50-70% correct. (Stones 30%; Visualized Gallbladder 50-60%; Oesophagospasm 80%; occurrence in other conditions.)

3—Appendix of little value.